(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(54) Title: INTERFERENCE-FREE LMS-BASED ADAPTIVE ASYNCHRONOUS RECEIVER
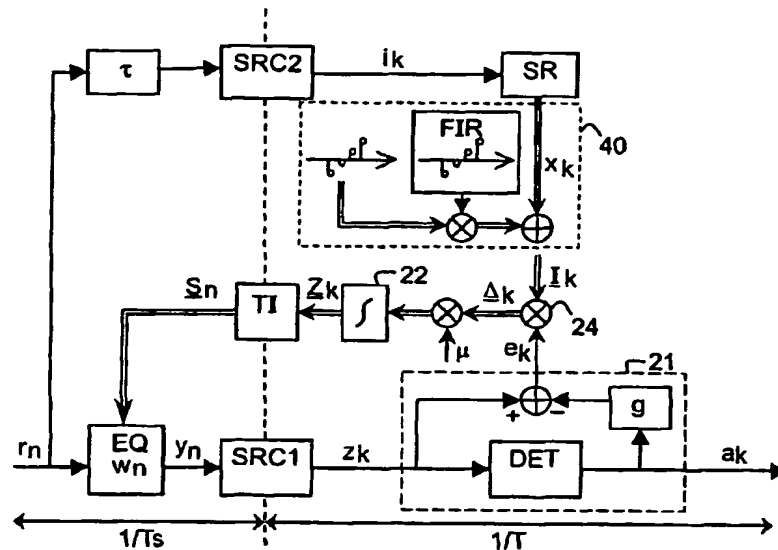
(57) Abstract: The invention relates to an interference-free LMS-based asynchronous receiver for digital transmission and recording systems. The receiver, having an asynchronously placed LMS-based adaptive equalizer, has 2 control loops: a timing recovery loop (by means of, for instance a PLL (Phase locked loop) and an equalizer's adaptation loop. Interference between the two loops is avoided by deriving a condition the equalizer should fulfill to avoid the interference between the two loops, which implies "orthogonal control functionality" and by combining the condition with the equalizer's adaptation loop. The equalizer shall adapt so that the condition is always true.

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For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.